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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,032	02/05/2001	Stephen A. Bagshaw	ATI010003	2306
34456	7590	12/16/2004		
TOLER & LARSON & ABEL L.L.P. 5000 PLAZA ON THE LAKE STE 265 AUSTIN, TX 78746			EXAMINER HENEGHAN, MATTHEW E	
			ART UNIT 2134	PAPER NUMBER
DATE MAILED: 12/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,032

Applicant(s)

BAGSHAW, STEPHEN A.

Examiner

Matthew Heneghan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-32 have been examined.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: figure 1, item "125."
3. The drawings are objected to as failing to comply with 37 CFR 1.84 (g) and (p)(3) because figure 5 has margins outside specification and several reference characters that are less than 1/8" tall and/or overwrite dotted lines.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

It lacks a Brief Summary of the Invention. See MPEP § 608.01(d). It is suggested that Applicant would be able to create a Brief Summary without entering new matter by either copying the abstract or by moving the first paragraph of the Detailed Description (see p.3, line 8-19).

The specification also contains multiple references to an enclosed document, "Upstream Link for HDCP Revision 0.95 (e.g. see Specification, p.8, line 21). The document has not been found in the application.

Appropriate correction is required.

Claim Objections

6. Claim 11 is objected to because of the following informalities: It is not clear by what measure one would determine whether a data stream runs at "twice the speed" of

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another data stream. It is being presumed that this means that a data stream running at twice the speed has two times the cumulative data throughput per unit time as opposed to the other data stream. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 6, 14, 18, and 28 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for all limitations of base claim 5, does not reasonably provide enablement for HDCP encryption. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Since it is impossible to ascertain how these limitations relate to the rest of the invention, these claims will be considered to be obvious over claims 5, 12, 17, and 27 respectively, in this office action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 3 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the peripheral controller" in lines 16 and 19. There is insufficient antecedent basis for this limitation in the claim. It is being presumed that these refer to the entity that is communicating with the "peripheral device" recited on lines 15 and 18.

Claim 7 recites the limitation "the second see key" in line 6. There is insufficient antecedent basis for this limitation in the claim. It is being presumed that this refers to the "second encryption key" of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

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directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,091,936 to Katznelson et al.

As per claim 1, Katznelson discloses the encrypting of portions of a data stream, such as video and audio, each using encryption algorithms (see column 6, lines 23-35).

10. Claims 12, 20, 25, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,091,936 to Katznelson et al. and U.S. Patent No. 4,613,901 to Gilhousen et al.

Over and above what is discussed with respect to claim 1, above, Katznelson incorporates the Gilhousen patent (Katznelson, column 4, lines 42-45).

Gilhousen discloses the use of a control computer, which inherently contains a data processor and has I/O buffers (see column 6, lines 13-24), that saves the necessary keys in address groups, which inherently is stored in memory (see column 1, lines 17-37). The memory locations where the encryption keys are stored are considered to be registers.

Katznelson discloses a demodulator (demultiplexer) see column, 9, lines 51-60).

As per claims 20 and 31, television uses video controllers.

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11. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,052,466 to Wright.

As per claim 1, Wright discloses a system wherein a single data stream is divided into at least two cipher streams, each respectively using a generated key (see column 5, line 58 to column 6, line 45).

As per claim 2, multiple cipher streams are created using the second cipher stream generator (see column 6, lines 3-21 and figure 3).

As per claim 3, each device's keys are generated using the other device's public key, in conjunction with a random quantity (x), which has been then used to generate a series of private keys. The encryption key is taken from the set of private keys (see column 5, line 43 to column 6, line 21).

As per claims 4 and 25, the streams are then decrypted and reconstructed at the receiving end (see column 6, lines 44-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 4, 9-11, 13-16, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,091,936 to Katznelson et al. as applied to claims 1 and 12 above, and further in view of U.S. Patent No. 6,597,402 to Butler et al.

Katznelson does not disclose the separating of the video stream into separate streams and does not discuss the timing relationships between the individual streams and the combined stream.

Butler discloses the splitting (and later recombining) of a video stream into separate data streams, placing even pixels into one stream and odd pixels into the other. Butler also discloses the use of a "line doubler," which ensures that each of the two (odd and even) streams transmits at half the throughput of the video stream (see column 10, line 53 to column 11, line 15), and further suggests that line doubling reduces visible line structure (see column 1, lines 35-37). The line doubler uses a half-speed clock in its operation.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Katznelson by separating the stream into even and odd pixel streams and using line doubling, as disclosed by Butler, as that line doubling reduces visible line structure.

Regarding claim 26, a single component processes the streams (see Katznelson, figure 1).

13. Claims 5, 6, 17, 18, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,091,936 to Katznelson et al. in view of U.S. Patent

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No. 6,597,402 to Butler et al. as applied to claims 4, 16, and 25 and further in view of U.S. Patent No. 4,332,464 to Bartulis et al.

Katznelson discloses the receiving of horizontal and vertical sync signals as well as a clock signal (see Katznelson, column 5, lines 49-62). Katznelson and Butler do not disclose the need for a Display Enable signal.

Bartulis discloses the use of a Display Enable signal for video transmissions, and further suggests that this is used to inform the video system that the CRT is ready to accept video (see column 12, lines 7-10).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Katznelson and Butler by using a Display Enable signal, as discloses by Bartulis, in order to inform the video system that the CRT is ready to accept video.

14. Claims 7, 8, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,091,936 to Katznelson et al. in view of U.S. Patent No. 6,597,402 to Butler et al. further in view of U.S. Patent No. 4,332,464 to Bartulis et al. as applied to claims 5, 17, and 27 and further in view of U.S. Patent No. 4,389,671 to Posner et al.

Katznelson, Butler, and Bartulis do not disclose rekeying in response to the horizontal sync signal.

Posner discloses the varying of keys as triggered by the horizontal sync pulses, and further suggests that gives increased security (see column 7, lines 9-25).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the invention of Katznelson, Butler, and Bartulis by modifying the keys in accordance with the horizontal sync pulses, as disclosed by Posner, to give increased security.

15. Claims 21 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,091,936 to Katznelson et al. and U.S. Patent No. 4,613,901 to Gilhousen et al. as applied to claim 20 above, and further in view of U.S. Patent No. 6,507,346 to Otera.

Katznelson and Gilhousen do not specifically mention the use of DVO ports.

Otera discloses the use of DVO ports in a system having odd and even sections and notes that this is for providing output to the displays (see column lines 30-35 and abstract).

Therefore it would have obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Katznelson and Gilhousen with a DVO port, as disclosed by Otera, for providing output to the displays.

16. Claim 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,091,936 to Katznelson et al. and U.S. Patent No. 4,613,901 to Gilhousen et al. further in view of U.S. Patent No. 6,507,346 to Otera as applied to claim 21 above, and further in view of Digital Display Working Group, DVI Specification 1.0, 1999 (hereinafter "DDWG").

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Katznelson, Gilhousen, and Otera do not specifically mention the use of TMDS.

DDWG discloses the usage of the TMDS protocol, and further note that it allows bandwidth to be evenly divided between two links (see section 2.1).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the invention of Katznelson, Gilhousen, and Otera using TMDS, as disclosed by DDWG, as it allows bandwidth to be evenly divided between two links.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (571) 272-3834. The examiner can normally be reached on Monday, Tuesday, Thursday, and Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached at (571) 272-3838.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(703) 872-9306

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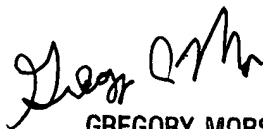
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEH



December 10, 2004



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